

REMARKS

Claims 1-18, as amended, and new claims 24-28 are pending in this application. In this Response, Applicant has amended certain claims. In light of the Office Action, Applicant believes these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicant respectfully submits that the claim amendments do not limit the range of any permissible equivalents.

In particular, independent claims 1, 12, and 19 have been rewritten to further clarify the embodiments of the present invention recited therein. In addition, various dependent claims have been rewritten or canceled to maintain consistency with the language now recited in the independent claims. Finally, new claims 24-28 have been added to recite an embodiment of the invention fully supported by the Written Description at Page 8, lines 5-12.

As no new matter has been added, Applicant respectfully requests entry of these amendments at this time.

DRAWINGS

The Examiner objected to the drawings for the reasons provided on page 2 of the Office Action. Applicant respectfully submits that new drawings in compliance with 37 C.F.R. § 1.121(d) have been filed concurrently under a separate transmittal paper.

THE REJECTIONS UNDER 35 U.S.C. § 102

Claims 19 was rejected under 35 U.S.C. § 102(b) as anticipated by Ermert *et al.*, "A New Concept for a Real-time Ultrasound Transmission Camera," 2000 IEEE Ultrasonics Symposium ("Ermert") for the reasons stated on pages 2-3 of the Office Action.

In light of the cancellation of claims 19-23, Applicant respectfully submits that this rejection is moot. Thus, reconsideration and withdrawal of the § 102 rejection based thereon is respectfully requested.

THE REJECTIONS UNDER 35 U.S.C. § 103***The Rejection Based on Ermert Is Moot***

The Examiner rejected claim 21 under 35 U.S.C. § 103(a) as obvious over Ermert as provided on pages 3-4 of the Office Action. As explained above, claims 19-23 have been canceled. As such, the rejection of claim 21 based on Ermert is moot.

Chang and McTeigue Do Not Render the Present Invention Obvious

Claims 1-18 were rejected under § 103(a) as obvious over U.S. Patent No. 5,432,054 to Chang *et al.* ("Chang") and further in view of U.S. Patent No. 5,372,36 to McTeigue *et al.* ("McTeigue") for the reasons set forth on pages 4-7 of the Office Action. However, for the reasons discussed below, this combination does not render the present invention obvious.

As the Examiner recognizes, Chang does not disclose or even suggest the use of a trigger that uses ultrasonic waveforms. Office Action at Page 4. In fact, Chang discloses the conventional type of trigger discussed in the background section of the instant application.

For example, the photodetectors 20 and 22 of Chang's system are optical in nature. Col. 7, lines 15-18. As such, the "trigger" is dependent on whether or not light from the sensor lamp 88 is blocked by the golf club as it is being swung past the sensor array 16. Col. 7, lines 22-26. As described in the Written Description, however, generally this type of device is susceptible to interference from sunlight, which may lead to an incorrect dwell (or delay) time. Page 1, line 29 to Page 2, line 2. To overcome this shortcoming in the prior art, the present invention uses an ultrasonic trigger as a means to determine information about the movement of an object and activate image acquisition equipment based on this movement. Page 4, lines 19-22.

The Examiner attempts to remedy the deficiency in Chang with McTeigue, however, McTeigue does not teach or even suggest ultrasonic sensors or triggers that are operable to determine the movement of the object as presently recited. Rather, the sensors in McTeigue, used to monitor user factors (Col. 5, lines 22-26), are pressure sensors (Col. 6, lines 30-34), inclinometers (Col. 8, lines 23-28), and angular displacement sensors (Col. 8, lines 56-62). The information received from these sensors are then compared to one or more reference values and communicated to a signal generator that generates training signals which are communicated to the user. Col. 9, lines 8-9 and 38-41. It is only in context of the training signal that ultrasonic waves are even suggested. See, e.g., Col. 10, lines 25-32. In other words, the McTeigue does not disclose or even suggest the use of reflected ultrasonic waves as a means to acquire any information from the movement of an object. Thus, any possible use of ultrasonic frequency in McTeigue is envisioned only as a means to communicating the information already acquired and assimilated by the sensors.

As such, the combined teachings of Chang and McTeigue would not even suggest the presently recited invention to a skilled artisan. Rather, at best, a skilled artisan might have been motivated to improve the Chang system by including the additional feature of a training

signal to provide feedback to the user (possibly based on infrared or ultrasonic transmitters and receivers). In view of the combined lack of teaching or suggestion in the Chang or McTeigue, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejections based thereon.

CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicant invites the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Petition for Extension of Time is submitted herewith to extend the time for response two months to and including September 4, 2007. No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Bingham McCutchen LLP Deposit Account No. 50-4047, Order No. 20002.0327.

Respectfully submitted,
BINGHAM MCCUTCHEN LLP

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By: 
Stephanie D. Scruggs, Registration No. 54,432
BINGHAM MCCUTCHEN LLP
2020 K Street, NW
Washington, D.C. 20006
(202) 373-6755 Telephone
(202) 373-6001 Facsimile